tors for developmental delay and 12 normal infants were used for assessment, with 10, 20 and 20 recordings for preterm, writhing and fidgety periods, respectively. The tapes were rated by 3 physical therapists at the same time and re-rated one month later. The consistencies within rater and between raters were analysed using kappa statistics.
Results.– The intra-rater agreement was high, but the inter-rater agreements ranged between substantial and high. The lower reliabilities between raters might arise from disagreement in identifying the subcategories of abnormal general movements.
Discussion.– The reliability of the GMA was acceptable either within or between raters. With proper training, the technique could be applied in the infants with high-risk factors for developmental delay in our settings. Further studies to determine the validity of the assessment are needed.

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P360-e

Deep brain stimulation could be an effective treatment in cerebral palsy?

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Keywords: Cerebral palsy; Brain stimulation; Rehabilitation
Introduction.– Cerebral palsy with dystonia-choreoathetosis is a common cause of disability. Pharmacological treatment is often unsatisfactory. Deep brain stimulation could be an effective treatment option in these patients?
Material and methods.– Review of literature based on selected articles from Medline research database until November 2013.
Result.– During the last decade, several case reports have been published about this treatment in patients with dyskinetic cerebral palsy. In most studies, the globus pallidus internus was the primary target for stimulation, but other studies reported the subthalamic nucleus or thalamus with varying results. This technique showed an improvement in disability, quality of life, pain, and social interactions in most patients, whereas cognitive function and mood are preserved. Young patients with little spasticity have a better response to treatment, unlike patients with irreversible deformations.
Discussion/Conclusion.– Scales that assess performance in gross motor function should be included in future studies, and physical and rehabilitation medicine should be involved.
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P361-e

Radial head luxation in unilateral congenital below elbow deficiency (UCBED), its relevancy

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Keywords: Radial head luxation; Below elbow deficiency
Objective.– In children with a unilateral congenital elbow deficiency, a radial head luxation occurs frequently. No exact data are present to which amount it poses a problem, such as physical complaints or problems in providing and using a prosthesis.
Material.– Three cases with radial head luxation in children with unilateral congenital below elbow deficiency will be presented concerning history, physical examination and work up with diagnostic procedures. The consequences for presented.
Discussion.– Radial head luxation in children with UCBED can be seen frequently but exact data concerning its prevalence in children with UCBED are not available. Awareness on symptoms and complaints is mandatory to advice parents on treatment options.
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P362-e

Epilepsy in patients with multiple disabilities: Healthcare project in institution

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Patients with multiple disabilities frequently develop epilepsy with a high proportion of severe cases, significantly impacting daily life and care.
Objective.– The aim is to show how a multidisciplinary approach and acknowledgement of the disability impacts patient care.
Method.– Our observational cohort comprised 77 multiply disabled patients, 67% of which suffered epilepsy, both adult and underage, living in one of two APF-Handas institutions (near Rennes). The analysis focused upon different types of epilepsy and care among those patients. Disease severity and subsequent disability were assessed using a scale provided by the EFAPPE comity.
Results.– Multidisciplinary reviewing and coordination on patient cases has resulted in reduced needs of medication and hospital care, and–sometimes surprisingly–better adaptation responses to the disorder.
Conclusion.– To the multiply disabled person, epilepsy in itself has to be acknowledged as a disability. Its treatment should be a whole part of the healthcare program.

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P363-e

Treatment of equinus foot in patients with cerebral palsy

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Keywords: cerebral palsy; Equinus; Spasticity; Toxin; Plaster walking boots; Orthotic
Equinus in patients with cerebral palsy results from two factors: excessive contracture of the triceps surae and muscle retraction.
Objective.– To evaluate functional aspects and to appreciate the results of different treatments in our institution.
Materials and methods.– Ninety infants with cerebral palsy were treated in PMR department at Canastel hospital between January 2011 and May 2012. We measure the maximal passive dorsal flexion angle of the foot, before and after treatment. We appreciate the quality of ankle motion before and after treatment. Treatments were: physical therapy, toxin, progressive lengthening technique using plaster walking boots and orthotic device.
Results.– Forty-eight percent of infants can walk, they had equinus gait, 5% had dynamic equines with good passive dorsal flexion. All patient had toxin injections. Ninety percent had a mean of two plaster walking boots. Mean gain obtained was 10° knee flexed. Eighty percent had orthotic after plaster.

Discussion.– Good results are obtained with association: toxin injections and plaster walking boots. For dynamic equinus only toxin injections are needed. Need of quantitative gait analysis for better appreciations.

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P364-e

Rehabilitation strategies in bilateral longitudinal deficiency of tibia: A clinical case

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Keywords: Longitudinal deficiency of tibia; Prosthetic training; Rehabilitation
Objective.– Bilateral longitudinal deficiency of tibia (BLDT) is a rare condition, often requiring elective amputation and specific rehabilitation strategies. The aim of this work is to describe a clinical case of BLDT.
Material.– L.F., female, 3 weeks old, was referred to our department in the context of BLDT, left hip dysplasia and psychomotor development delay. LF was integrated in a rehabilitation program. At 9 months of age, bilateral knee disarticulation was performed. At 19 months, L.F.'s psychomotor skills were developing favourably and prosthetic training was initiated using endoskeletal prostheses with total contact socket, silicone liner, suspension pin and pediatric SACH foot. Regular evaluations and prosthetic adaptations were made. A second pair of prostheses and a wheeled pediatric walker were necessary at 37 months of age. At this point, L.F. assisted donning the prostheses, helped in transfers and performed assisted broad based gait.
Discussion.– Despite the combination of bilateral knee disarticulation, hip dysplasia and psychomotor development delay, L.F.'s function improved progressively, reinforcing the importance of early and integrated multidisciplinary rehabilitation approach.
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P365-e

Perinatal stroke–Clinical aspects and neurodevelopmental outcomes

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Keywords: Perinatal stroke; Newborn; Magnetic Resonance Imaging
Objective.– Perinatal stroke is a cerebrovascular event occurring during foetal or neonatal life, before 28 days after birth, with pathological or radiological evidence of focal arterial infarction of brain. The aim of this study was to describe clinical presentations and neurodevelopmental outcomes of our case series of perinatal stroke.
Materials and methods.– A retrospective study was performed at Special Hospital for Cerebral Palsy and Developmental Neurology in Belgrade. We evaluated the psychomotor development of twelve children with perinatal stroke by using the Munich Functional Developmental Diagnosis.
Results.– Ninety-two percent of respondents were born at term. Both sexes were equally represented. Perinatal stroke was presented with neonatal seizure in 42% children, with apnoeic crises in 8%, 17% had positive thrombophilic test and 8% had a congenital heart disease. Perinatal stroke was usually a consequence of infarction in the middle cerebral artery (MCA) 84%, 25% in MCA and anterior cerebral artery, and 16% had a bilateral stroke in MCA. Seventy-five percent of evaluated children had unilateral form of cerebral palsy and 25% had bilateral spastic form. All children are late in adopting the milestones of early motor development.
Discussion.– Hemiplegic cerebral palsy is a common outcome of perinatal stroke.

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P366-e

Effects, paradox and perspectives associated with the use of a unilateral torsion splint in a 5 years old young hemiplegic

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Keywords: Gait analysis; Hemiplegia; Child; Torsion splint
Introduction.– The patient, prematured, has a left hemiplegia resulting of a prenatal stroke. At 4 years, her varus-equinus is reduced from –50° to–10° by toxin and casts, then to +5° by a gastrocnemius fasciotomy. During this treatment, a hip external rotation and stiff knee gait appeared. At 5 years, the transverse disorders are confirmed by quantified gait analysis and a unilateral torsion splint is prescribed. Its effects are studied by an advanced biomechanical modeling.
Material.– External foot progression is corrected (+22°) by a decrease in external hip rotation (+12°) and a correction of the pelvis external rotation (10°). Right knee flexion has improved (+15°). Left foot progression improves from 0° to–15°.
Discussion.– The expected splint effect is validated. Meanwhile, unexpected improvements effects on the knee and contralateral foot are measured. Paradoxically, the right external rotation of the pelvis is corrected despite the opposite torque transmitted by the cable. An improved presentation of the foot might allow a compensation of this potentially disturbing torque. These effects will be incorporated into the decision process of a possible femoral osteotomy.

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P367-e

Evaluation of an exercise training protocol with the Energy Expenditure Index (EEI) in young cerebral palsy

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Keywords: EEI (Energy Expenditure Index); CP (Cerebral Palsy); Exercise training
The energy expenditure index (EEI) is a functional index to evaluate walking problems calculated during a regular walk for 5 minutes and spontaneous. Two reference values were measured (before and after strength training protocol on ergonomic bike) in 15 children with cerebral palsy, including 10 males and 5 females (mean age 15 ± 2). After a statistic test, it has been found that the post-protocol value is significantly lower ($P = 0.0008$), which means a walk energetically costs less after training program. The IDE is a tool for functional assessment of objective and reliable test. After the results, it was concluded that physical activity and especially the strength training is highly recommended for children with motor disabilities.
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